

Federal Communications Commission

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with part 25 and part 100 of this Chapter. If the non-U.S. licensed space station is in orbit and operating, the applicant need not include the financial information specified in §§ 25.114(c)(17) and (c)(18) of this part. If the international coordination process for the non-U.S. licensed space station has been completed, the applicant need not include the technical information specified in §§ 25.114(c)(5) through (c)(11) and (c)(14) of this part, unless the technical characteristics differ from the characteristics established in that process.

(c) A non-U.S. licensed satellite system seeking to serve the United States can be considered contemporaneously with other U.S. satellite systems if it is:

- (1) In orbit and operating;
- (2) Has a license from another administration; or
- (3) Has been submitted for coordination to the International Telecommunication Union.
- (d) Earth station applicants requesting authority to operate with a non-U.S. licensed space station must demonstrate that the space station the ap-

plicant seeks to access has complied with all applicable Commission milestones, reporting requirements, and any other applicable service rules required for non-U.S. licensed systems to operate in the United States.

[62 FR 64172, Dec. 4, 1997, as amended at 64 FR 61792, Nov. 15, 1999; 65 FR 16327, Mar. 28, 2000; 65 FR 59143, Oct. 4, 2000]

§ 25.138 Blanket licensing provisions of GSO FSS Earth Stations in the 18.58–18.8 GHz (space-to-Earth), 19.7–20.2 GHz (space-to-Earth), 28.35–28.6 GHz (Earth-to-space) and 29.5–30.0 GHz (Earth-to-space) bands.

(a) All applications for a blanket earth station license in the GSO FSS in the 18.58–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz and 29.5–30.0 GHz bands that meet the following requirements shall be routinely processed:

- (1) GSO FSS earth station antenna off-axis EIRP spectral density for co-polarized signals shall not exceed the following values, within $\pm 3^\circ$ of the GSO arc, under clear sky conditions:

18.5–25log(θ)–10log(N) ...	dBW/40kHz	.....	for $2.0^\circ \leq \theta \leq 7^\circ$
–2.63–10log(N)	dBW/40kHz	.....	for $7^\circ \leq \theta \leq 9.23^\circ$
21.5–25log(θ)–10log(N) ...	dBW/40kHz	.....	for $9.23^\circ \leq \theta \leq 48^\circ$
–10.5–10log(N)	dBW/40kHz	.....	for $48^\circ < \theta \leq 180^\circ$

Where:

θ is the angle in degrees from the axis of the main lobe; for systems where more than one earth station is expected to transmit simultaneously in the same bandwidth, *e.g.*, CDMA systems,
N is the likely maximum number of simultaneously transmitting co-frequency earth

stations in the receive beam of the satellite; N=1 for TDMA and FDMA systems.

- (2) GSO FSS earth station antenna off-axis EIRP spectral density for co-polarized signals shall not exceed the following values, for all directions other than within $\pm 3^\circ$ of the GSO arc, under clear sky conditions:

21.5–25log(θ)–10log(N) ...	dBW/40kHz	.....	for $3.5^\circ \leq \theta \leq 7^\circ$
0.37–10log(N)	dBW/40kHz	.....	for $7^\circ < \theta \leq 9.23^\circ$
24.5–25log(θ)–10log(N) ...	dBW/40kHz	.....	for $9.23^\circ < \theta \leq 48^\circ$
–7.5–10log(N)	dBW/40kHz	.....	for $48^\circ < \theta \leq 180^\circ$

Where:

θ : is the angle in degrees from the axis of the main lobe; for systems where more than one earth station is expected to transmit

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simultaneously in the same bandwidth, *e.g.*, CDMA systems.

N: is the likely maximum number of simultaneously transmitting co-frequency earth stations in the receive beam of the satellite; N=1 for TDMA and FDMA systems.

(3) The values given in paragraphs (a) (1) and (2) of this section may be exceeded by 3 dB, for values of $\theta > 10^\circ$, provided that the total angular range over which this occurs does not exceed 20° when measured along both sides of the GSO arc.

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(4) GSO FSS earth station antenna off-axis EIRP spectral density for cross-polarized signals shall not exceed the following values, in all directions relative to the GSO arc, under clear sky conditions:

(4) GSO FSS earth station antenna off-axis EIRP spectral density for cross-polarized signals shall not exceed the following values, in all directions relative to the GSO arc, under clear sky conditions:

8.5–25log(θ)–10log(N)	dBW/40kHz	for $2.0^\circ \leq \theta \leq 7^\circ$
12.63–10log(N)	dBW/40kHz	for $7^\circ < \theta \leq 9.23^\circ$

Where:

θ : is the angle in degrees from the axis of the main lobe; for systems where more than one earth station is expected to transmit simultaneously in the same bandwidth, *e.g.*, CDMA systems.

N: is the likely maximum number of simultaneously transmitting co-frequency earth stations in the receive beam of the satellite; N=1 for TDMA and FDMA systems.

(5) For earth stations employing uplink power control, the values in paragraphs (a) (1), (2), and (4) of this section may be exceeded by up to 20 dB under conditions of uplink fading due to precipitation. The amount of such increase in excess of the actual amount of monitored excess attenuation over clear sky propagation conditions shall not exceed 1.5 dB or 15 % of the actual amount of monitored excess attenuation in dB, whichever is larger, with a confidence level of 90 percent except over transient periods accounting for no more than 0.5% of the time during which the excess is no more than 4.0 dB.

(6) Power flux-density (PFD) at the Earth's surface produced by emissions from a space station for all conditions, including clear sky, and for all methods of modulation shall not exceed a level of -118 dBW/m²/MHz, in addition to the limits specified in § 25.208 (d).

(b) Each applicant for earth station license(s) that proposes levels in excess of those defined in paragraph (a) of this section shall submit link budget analyses of the operations proposed along with a detailed written explanation of how each uplink and each transmitted

satellite carrier density figure is derived. Applicants shall also submit a narrative summary which must indicate whether there are margin shortfalls in any of the current baseline services as a result of the addition of the applicant's higher power service, and if so, how the applicant intends to resolve those margin short falls. Applicants shall certify that all potentially affected parties (i.e., those GSO FSS satellite networks that are 2, 4, and 6 degrees apart) acknowledge and do not object to the use of the applicant's higher power densities.

(c) Licensees authorized pursuant to paragraph (b) of this section shall bear the burden of coordinating with any future applicants or licensees whose proposed compliant operations at 6 degrees or smaller orbital spacing, as defined by paragraph (a) of this section, is potentially or actually adversely affected by the operation of the non-compliant licensee. If no good faith agreement can be reached, however, the non-compliant licensee shall reduce its earth station and space station power density levels to be compliant with those specified in paragraph (a) of this section.

(d) The applicant shall provide for each earth station antenna type, a series of radiation patterns measured on a production antenna performed on a calibrated antenna range and, as a minimum, shall be made at the bottom, middle, and top frequencies of the 30 GHz band. The radiation patterns are:

(1) Co-polarized patterns for each of two orthogonal senses of polarizations

in two orthogonal planes of the antenna.

(i) In the azimuth plane, plus and minus 10 degrees and plus and minus 180 degrees.

(ii) In the elevation plane, zero to 30 degrees.

(2) Cross-polarization patterns in the E- and H-planes, plus and minus 10 degrees.

(3) Main beam gain.

(e) Protection of receive earth stations from adjacent satellite interference is based on either the antenna performance specified in § 25.209 (a) and (b), or the actual receiving earth station antenna performance, if actual performance provides greater isolation from adjacent satellite interference. For purposes of insuring the correct level of protection, the applicant shall provide, for each earth station antenna type, the antenna performance plots for the 20 GHz band, including the format specified in paragraph (d) of this section.

(f) The earth station licensee shall not transmit towards a GSO FSS satellite unless it has prior authorization from the satellite operator or a space segment vendor authorized by the satellite operator. The specific transmission shall be conducted in accordance with the operating protocol specified by the satellite operator.

(g) A licensee applying to renew its license must include on FCC Form 405 the number of constructed earth stations.

[65 FR 54169, Sept. 7, 2000, as amended at 66 FR 63515, Dec. 7, 2001]

§ 25.139 NGSO FSS coordination and information sharing between MVDDS licensees in the 12.2 GHz to 12.7 GHz band.

(a) NGSO FSS licensees shall maintain a subscriber database in a format that can be readily shared with MVDDS licensees for the purpose of determining compliance with the MVDDS transmitting antenna spacing requirement relating to qualifying existing NGSO FSS subscriber receivers set forth in § 101.129 of this chapter.

(b) Within ten business days of receiving notification of the location of a proposed MVDDS transmitting antenna, the NGSO FSS licensee shall

provide sufficient information from the database to enable the MVDDS licensee to determine whether the proposed MVDDS transmitting site meets the minimum spacing requirement.

(c) If the location of the proposed MVDDS transmitting antenna site does not meet the separation requirements of § 101.129 of this chapter, then the NGSO FSS licensee shall also indicate to the MVDDS licensee within the same ten day period specified in paragraph (b) of this section whether the proposed MVDDS transmitting site is acceptable at the proposed location.

(d) Nothing in this section shall preclude NGSO FSS and MVDDS licensees from entering into an agreement to accept MVDDS transmitting antenna locations that are shorter-spaced from existing NGSO FSS subscriber receivers than the distance set forth in § 101.129 of this chapter.

[67 FR 43037, June 26, 2002]

EFFECTIVE DATE NOTE: At 67 FR 43037, June 26, 2002, § 25.139 was added. This section contains information collection and record-keeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

SPACE STATIONS

§ 25.140 Qualifications of fixed-satellite space station licensees.

(a) New fixed-satellites shall comply with the requirements established in Report and Order, CC Docket No. 81-704 (available at address in § 0.445 of this chapter.) Applications must also meet the requirements in paragraphs (b) through (d) of this section. The Commission may require additional or different information in the case of any individual application. Applications will be unacceptable for filing and will be returned to the applicant if they do not meet the requirements referred to in this paragraph.

(b) Each applicant for a space station authorization in the fixed-satellite service must demonstrate, on the basis of the documentation contained in its application, that it is legally, financially, technically, and otherwise qualified to proceed expeditiously with the construction, launch and/or operation of each proposed space station facility immediately upon grant of the